

REMARKS

This responds to the Office Action mailed on June 1, 2007.

Claims 1, 3, 7, 14, 15, 17, 19, 23, 30 – 32, 36, 40, and 42 are amended, claims 43-45 are canceled; as a result, claims 1-42 are now pending in this application.

Allowable Subject Matter

Claims 7, 8, 14, 15, 23, 24, 30 and 31 were objected to as being dependent upon a rejected base claim, but were indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 7 has been rewritten in independent form including all of the limitations of the base claim 1 and is believed to be in condition for allowance. Claim 8 is believed to be allowable at least because of its dependency on claim 7.

Claim 14 has been rewritten in independent form including all of the limitations of the base claim 1 and is believed to be in condition for allowance.

Claim 15 has been rewritten in independent form including all of the limitations of the base claim 1 and intervening claims 2 and 3, and is therefore believed to be in condition for allowance.

Claim 23 has been rewritten in independent form including all of the limitations of the base claim 17 and is believed to be in condition for allowance. Claim 24 is believed to be allowable at least because of its dependency on claim 23.

Claim 30 has been rewritten in independent form including all of the limitations of the base claim 17 and intervening claim 25 and is believed to be in condition for allowance.

Claim 31 has been rewritten in independent form including all of the limitations of the base claim 17 and is believed to be in condition for allowance.

§103 Rejection of the Claims

Claims 1, 2, 9, 16-18, 25, 32, 36, 37, 40 and 41 were rejected under 35 USC § 103(a) as being unpatentable over Lehning et al. (U.S. 2005/0107059) in view of Mo et al. (U.S. 7,187,916).

Claims 3-6, 19-22, 34, 35, 38, 39 and 42-45 were also rejected under 35 USC § 103(a) as being unpatentable over Lehning et al. and Mo et al. in view of Wiggins (U.S. 4,216,503).

Claims 10-12, 26-28 and 33 were also rejected under 35 USC § 103(a) as being unpatentable over Lehning et al. and Mo et al. in view of Andersson et al. (U.S. 6,339,399).

Claims 13 and 29 were also rejected under 35 USC § 103(a) as being unpatentable over Lehning et al., Mo et al. and Andersson et al. in view of Rhee et al. (U.S. 2003/0227989).

Applicant's claim 1 is directed to a method of reducing offsets of a transceiver and includes measuring receiver amplitude and phase mismatches of receiver radio-frequency (RF) circuitry by performing a fast Fourier transform (FFT) on a receiver calibration signal and applying receiver amplitude and phase offsets to substantially offset the receiver mismatches. Applicant's claim 1 recites applying a transmitter calibration signal and measuring transmitter amplitude and phase mismatches of transmitter RF circuitry by performing an FFT on the transmitter calibration signal. As further recited in claim 1, measuring the receiver amplitude and phase mismatches includes measuring an image component of the receiver calibration signal and measuring the transmitter amplitude and phase mismatches includes measuring an image component of the transmitter calibration signal. Independent claims 17, 32, 36, and 40 have similar recitations.

Applicants find no teaching, suggestion, or motivation in any of the cited references to use image components generated in receiver and transmitter circuitry as part of a calibration procedure. The Examiner has stated that Lehning and Mo fail to disclose measuring image components of calibration signals and states that Wiggins does.

Applicant's image signals are frequencies that are generated due to amplitude and/or phase mismatches in the I and Q signal paths of the receiver and/or transmitter circuitry. Image signals in radio-frequency (RF) communications have no relation to visual images.

Applicant's claim 3 recites that the image component of the receiver calibration signal results from mismatches in the receiver RF circuitry and the image component of the transmitter calibration signal results from mismatches of the transmitter RF circuitry. Clearly, these image components cannot be interpreted as visual images or components of visual images.

Applicants submit that Wiggins does not disclose the use of image signals as in Applicants' claims. Wiggin's uses if the terms "image" and "image signal" refer to visual images (see Wiggin's Abstract line referring to an image signal as a pixel in a line of image data). The purpose of Wiggins is to restore image signals in an image scanning device. The image signals in Wiggins may be viewed by photosensitive elements (see Wiggins column 1 lines 39 – 46) and clearly represent visual anomalies, not RF components of an RF signal.

Accordingly, combining Wiggins with Lehning and Mo does not result in Applicant's claimed invention. Applicants further submit that there is no teaching, suggestion, or motivation to combine Wiggins with either Lehning or Mo because Wiggins is not concerned with RF signal processing or calibration transceivers. Furthermore, because Wiggins is in the field of optics, which is unrelated to the field of RF circuitry, one of ordinary skill in the art would not look to the field of optics to solve problems with RF transceiver calibration.

In view of the above, Applicants submit that the rejection of claims 1 – 6, 9 – 13, 16 – 22, 25 – 29, and 32 – 41 under 35 U.S.C. § 103(a) has been overcome.

RESERVATION OF RIGHTS

In the interest of clarity and brevity, Applicant may not have addressed every assertion made in the Office Action. Applicant's silence regarding any such assertion does not constitute any admission or acquiescence. Applicant reserves all rights not exercised in connection with this response, such as the right to challenge or rebut any tacit or explicit characterization of any reference or of any of the present claims, the right to challenge or rebut any asserted factual or legal basis of any of the rejections, the right to swear behind any cited reference such as provided under 37 C.F.R. § 1.131 or otherwise, or the right to assert co-ownership of any cited reference. Applicant does not admit that any of the cited references or any other references of record are relevant to the present claims, or that they constitute prior art. To the extent that any rejection or assertion is based upon the Examiner's personal knowledge, rather than any objective evidence of record as manifested by a cited prior art reference, Applicant timely objects to such reliance on Official Notice, and reserves all rights to request that the Examiner provide a reference or affidavit in support of such assertion, as required by MPEP § 2144.03. Applicant reserves all rights to pursue any cancelled claims in a subsequent patent application claiming the benefit of

priority of the present patent application, and to request rejoinder of any withdrawn claim, as required by MPEP § 821.04.

CONCLUSION

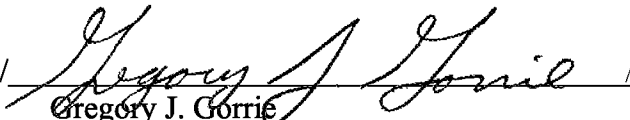
Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney ((480) 659-3314) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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